

PATENT CLAIMS

1. A dispersion comprising particles of at least one active substance dispersed in an aqueous solution of a modified starch, wherein said
5 dispersion has a pH value in the range 5 to 10.
2. A dispersion according to claim 1, wherein said modified starch is derived from a natural source, such as potato, wheat, maize, tapioca or rice.
- 10 3. A dispersion according to any of the claims 1 or 2, wherein said modified starch is chemically or enzymatically modified.
4. A dispersion according to any of the claims 1 to 3, wherein said modified starch is an n-octenyl succinyl acid modified starch.
- 15 5. A dispersion according to any of the claims 1 to 4, wherein said dispersion has a pH value in the range 7 to 10.
6. A dispersion according to any of the claims 1 to 5 further comprising an
20 antioxidant.
7. A process of preparing a dispersion comprising particles of at least one active substance dispersed in an aqueous solution of a modified starch, wherein said dispersion has a pH value in the range 5 to 10, which process
25 comprises the steps of
- a) providing an aqueous solution of said modified starch,
b) adding to said solution said at least one active substance,
c) treating the mixture thus obtained to prepare a dispersion of particles of said at least one active substance in said aqueous solution comprising said
30 modified starch,
characterised in that the process further comprises a step

d) of adjusting pH of the aqueous solution of said modified starch to the range 5-10 before or after adding said at least one active substance.

5 8. A process according to claim 7 for preparing microcapsules comprising at least one active substance embedded in a matrix of a modified starch, which process further comprises the step of
c1) finely dividing and drying the dispersion obtained in step c) to obtain a mass of particles each containing one single or a plurality of liquid or solid micro particles of said at least one active substance embedded in a matrix
10 comprising said modified starch.

9. A process according to any of the claims 7 or 8, wherein said modified starch is derived from a natural source, such as potato, wheat, maize, tapioca or rice.

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10. A process according to any of the claims 7 to 9, wherein said modified starch is chemically or enzymatically modified.

11. A process according to any of the claims 7 to 10, wherein said modified
20 starch is an n-octenyl succinyl acid modified starch.

12. A process according to any of the claims 7 to 11, wherein in step d) pH is adjusted to about 7 to 10.

25 13. A process according to any of the claims 7 to 12, comprising a further step e) of removing entrapped air and/or oxygen from the aqueous medium.

14. A process according to claim 13, wherein the entrapped air and/or oxygen in the aqueous medium is removed by evacuation/depressurization.

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15. A process according to claim 13, wherein the entrapped air in the aqueous medium is removed by steam injection followed by evaporation under vacuum (flash cooling).

5 16. A process according to any of the claims 7 to 15, wherein the treatment in step c) is effected by homogenising, emulsifying, milling or dispersing.

17. A process according to any of the claims 7 to 16, further comprising the adding of an antioxidant to the aqueous solution.

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18. A process according to any of the claims 7 to 17 further comprising the adding of an antioxidant to the non-aqueous solution.

15 19. A process according to any of the claims 7 to 18, further comprising a step f) of later readjusting pH to acidic conditions, e.g. to 3.5 to 5.

20 20. A process of preparing microcapsules comprising particles of at least one active substance embedded in a matrix of a modified starch which process comprises drying of a dispersion according to any of the claims 1 to 6 to remove water.

21. Use of a dispersion according to any of the claims 1 to 6 for preparing microcapsules.

25 22. Microcapsule comprising at least one active substance embedded in a matrix material of a modified starch, characterised in that it is obtainable by the process of any of the claims 8 to 20.

30 23. A product comprising a dispersion according to any of the claims 1 to 6.

24. A product comprising a dispersion obtainable according to any of the claims 7 or 9 to 19.

25. A product comprising microcapsules according to claim 22.

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26. A product according to any of the claims 23 to 25 characterised in that it is a food, a food supplement, a beverage, a pharmaceutical or veterinary product, a feed or feed supplement, a personal care product or a household product.

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